

WHAT IS CLAIMED IS:

1. A disconnect device comprising,

a mandrel having formed on an outer surface thereof at least one locking formation;

a hollow, female member in which the mandrel is releasably securable, the female member including at least one lug that is moveably retained relative to an inner surface thereof by a retainer member engaged with at least one retainer formation formed in said lug;

said lug further including one or more locking formations that are engageable with a corresponding said locking formation on the outer surface of the mandrel to lock the mandrel in the female member when said lug is in a first position relative to said inner surface, and that release the mandrel from the female member when in a second position relative to said inner surface; and

a second locking member that is moveable into and out of engagement with said retainer formation of said lug to selectively lock said lug in the said first position and release it therefrom to permit its movement to the said second position.
2. A disconnect device according to Claim 1, wherein said lug is partly received in an aperture in said female member, with a part of said lug protruding into an interior of said female member to permit engagement of said retainer formation thereof with said retainer member.

3. A disconnect device according to Claim 1, wherein said retainer formation of said lug includes two parallel retainer grooves formed on opposite sides thereof; and the retainer member includes a bifurcated lamina defining juxtaposed edges that are respectively received in said retainer grooves to retain said lug to prevent movement thereof relative to said inner surface of said female member.

4. A disconnect device according to Claim 1, wherein a plurality of said lugs is arranged in a circular series about said inner surface of said female member; and wherein said retainer member is generally cylindrical to permit engagement thereof with said retainer formation of each of said plurality of lugs.

5. A disconnect device according to Claim 1, wherein each said lug is at least partly received in an ovaloid aperture in said female member; and each said lug is of complementary shape to said aperture with which said lug is associated at least in a portion thereof in which said lug is received.

6. A disconnect device according to Claim 1, wherein said retainer formation of said at least one lug includes two parallel retainer grooves formed on opposite sides thereof; and wherein said locking member includes a bifurcated lamina defining juxtaposed edges that are respectively received in said retainer grooves to retain said lug in its first position in which said locking formations thereof lockingly engage said locking formations of said mandrel.

7. A disconnect device according to Claim 1, wherein a plurality of said lugs is arranged in a circular series about said inner surface of said female member;

and wherein said locking member is generally cylindrical to permit engagement thereof with said retainer formation of each of said plurality of lugs.

8. A disconnect device according to Claim 1, wherein a shear pin is provided for retaining said locking member in engagement with said locking formation of each said lug until acted on by a force sufficient to shear said shear pin.

9. A disconnect device according to Claim 1, wherein said mandrel is hollow.

10. A disconnect device according to Claim 1, wherein a moveable actuator member extends from one end of said mandrel to protrude beyond another end thereof, with movement of said actuator member in at least a first direction causing movement of said locking member out of engagement with said retainer formation.

11. A disconnect device according to Claim 1, wherein a moveable actuator member extends from one end of said mandrel to protrude beyond another end thereof, with movement of said actuator member in at least a first direction causing movement of said locking member out of engagement with said retainer formation, the actuator member including a seat for seating thereon of a release member, such seating causing said movement of said actuator member.

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com